Extron IP Intercom System Frequently Asked Questions

Extron IP Intercom System

General

1. **Is the IP Intercom System a VoIP system?**
   Yes. By definition, Voice over Internet Protocol (VoIP) is a technology that transmits voice communication over a data network, i.e., the Internet or a corporate network. Extron's IP Intercom System is not compatible with IP Telephony systems.

2. **Is the IP Intercom System compatible with IP Telephony systems?**
   Extron's IP Intercom System is not compatible with IP Telephony systems. IP Telephony systems offer the ability to carry telephone signals over a data network instead of the traditional POTS network. IP Telephony is also a VoIP system, but it uses other protocols such as H.323 or SIP defined by the International Telecommunications Union Telecommunication Standardization Sector (ITU-T) to manage the communication between handsets. IP Telephony systems provide two-way, full-duplex communications while the IP Intercom is two-way, half-duplex.

3. **Which products will the IPI 101 AAP and IPI 104 APP Intercom Modules work with?**
   The IP Intercom Modules will only work with IP Intercom-enabled MLC 226 IP MediaLink Controllers shipped after November 16, 2005. These controllers have an RJ-45 connector on the back panel labeled "Intercom."

4. **Can the IPI 101 AAP or IPI 104 AAP be used without an MLC 226 IP?**
   No. The bulk of the intercom processing capability resides in the MLC 226 IP, not the IPI modules.

5. **How do I know if my MLC 226 IP will work with the IPI 101 AAP and IPI 104 AAP?**
   It will work if the MLC 226 IP has the intercom RJ-45 and audio output connector. All controllers shipped after November 16, 2005 with an engineering revision number of E16076 or later are compatible with the IP Intercom System.

6. **Is there a trade-in program that would allow me to trade my older MLC 226 IP for one that supports the IP Intercom System?**
   This is taken on a case-by-case basis. Contact the Extron S3 Sales and Technical Support Hotline for details.

7. **How many locations can the IP Intercom Modules communicate with?**
   The IPI 101 AAP will communicate with one location; the IPI 104 AAP will communicate with four locations.

8. **What type of warranty do the IP Intercom Modules and MLC 226 IP MediaLink Controller products carry?**
   As with all powered products, Extron offers a three-year limited warranty on parts and labor for the IP Intercom Modules and MLC 226 IP MediaLink Controllers.

Network

1. **Are IP Intercom communications secure in any way?**
   Communications are encoded but not encrypted. Audio must be encoded in order to get from point A to B in the system. This product is intended for support applications and not for secure, confidential audio communications.

2. **Is the IP Intercom compatible with all networks?**
   The IP Intercom System can be integrated on all Ethernet-based networks. Sound reproduction and the quality of various other functionalities will vary depending on your network infrastructure and available bandwidth. Please contact the Extron S3 Sales and Technical Support Hotline for more information.

3. **How much network bandwidth does the IP Intercom System utilize when communicating?**
   An average 80 kbps (kilobits per second) of bandwidth is used for each unicast communication between two IP Intercom Modules or between an IP Intercom Module and the help desk. When making

announcements from the help desk, the bandwidth utilized is multiplied by the number of IP Intercom Modules the announcement is sent to. For instance, if the announcement is made to 10 IP Intercom Modules, the system will utilize 800 kbps of bandwidth.

4. **Is there a limit to how many active IP Intercom Modules can receive an announcement from the help desk at the same time?**
   This depends largely on the available bandwidth on your network. Extron recommends that you shouldn't exceed more than 25% of the total available bandwidth when making announcements. For instance, in a 100 Mbps (megabits per second) network, 25% utilization would be 25 Mbps, which allows the help desk to communicate with approximately 330 active IP Intercom Modules. This ensures that optimum sound quality is maintained. Please contact the Extron S3 Sales and Technical Support Hotline for more information.

5. **Does the specified network bandwidth of 80 kbps include the packet overhead with control or is that for audio bandwidth only?**
   80 kbps includes the overhead for the VoIP packets only. Control and status monitoring of the IP Intercom is performed separately using the Telnet protocol.

6. **What transmission method does the Extron IP Intercom System use to transmit audio data?**
   Unicast via UDP/IP is used to communicate between the help desk and an IP Intercom Module. When announcing to a group of IP Intercom Modules from the help desk, the message is simultaneously unicast to all selected IP Intercom Modules.

7. **Which TCP/IP protocols and standards are being used and what are they being used for?**
   Telnet protocol (TCP port 23) for control and status. The VoIP traffic is sent over UDP (User Datagram Protocol) using port 3121. The auto discovery function uses UDP ports 1230 and 1231.

8. **What type of voice communications does the IP Intercom Module use over the IP network?**
   Two-way, half-duplex, which means that voice data is transmitted in both directions, but not at the same time.

Hardware

1. **Will the IP Intercom Modules work with all MediaLink Controller models?**
   The IPI 101 AAP and IPI 104 AAP will work only with MLC 226 IP MediaLink Controllers shipped after November 16, 2005 (ER E16076 or later). You can tell if your controller supports the IPI modules by looking on its back panel. If it does, it will have a second RJ-45 connector labeled "Intercom" and an audio output. For additional information, see the MLC 226 IP firmware release notes.

2. **How do the IP Intercom Modules connect to the MLC 226 IP?**
   The two products connect via a CAT 5/5e/6 unshielded twisted pair cable. There are RJ-45 connectors on the MLC 226 IP MediaLink Controller as well as the IPI 101 AAP and the IPI 104 AAP control modules. Each IPI 101 AAP and IPI 104 AAP ships with a 12-inch (30 cm) long CAT 5 cable.

3. **How far apart can the IP Intercom Modules and the MLC 226 IP be?**
   Up to 100 feet (30 meters). Instead of populating the MLC 226 IP's AAP opening, an IP Intercom Module can be installed in a separate AAP mounting frame, such as the AAP 102.

4. **What is the pinout of the RJ-45 cable used to connect the IP Intercom Modules and MLC 226 IP?**
   568A or 568B. Either standard may be used as long as the pin-to-pin wiring is the same "straight-through" on both ends. This means that pin 1 of the RJ-45 plug on one end is connected to pin 1 of the plug on the other end. These connectors should be wired in accordance with the TIA/EIA 568A or TIA/EIA 568B wiring standards. The system will not work with a network crossover cable.

Software

1. **What software is needed to configure the IP Intercom System?**
   Extron's IP Intercom HelpDesk software has been developed for configuring and operating the IP Intercom system. All the other control and monitoring aspects of the MLC - MediaLink Controller must be configured using Extron's free Global Configurator software.

2. **How many IP Intercom Modules will the IP Intercom HelpDesk™ software support?**
   The HelpDesk application establishes a Telnet connection with each connected IP Intercom Module. It really depends on how many Telnet connections the PC hosting the HelpDesk software application can support.

3. **What will happen to the network if all the IP Intercoms on campus call the same help desk location simultaneously?**
   The help desk can carry on a conversation with one location at a time. If someone calls the help desk over the IP Intercom while the staff is speaking with another IP Intercom station, they will get a busy message and are placed in the HelpDesk software queue as a "Call Received" station.

4. **When using the IP Intercom HelpDesk software, can the help desk make announcements to more than one person at a time?**
   Yes. The help desk operator simply picks the locations they want to make the announcement to before they begin to talk. Your network bandwidth may limit the number of IP Intercom Modules you can communicate with simultaneously.

5. **Is there a software license fee for the IP HelpDesk software?**
   No. This is free software application that can be installed at as many locations as needed.

6. **Will the IP Intercom System work with GlobalViewer™?**
   Yes, if GlobalViewer has been loaded into the MLC 226 IP. The IP Intercom HelpDesk software provides a hyperlink that connects the help desk operator to the GlobalViewer Web page for the MLC 226 IP that originated the call. If GlobalViewer has not been loaded into the MLC 226 IP, then the help desk operator will see the standard embedded Web page inside the MLC 226 IP.

7. **Will the IP Intercom System work with Global Configurator?**
   The IP intercom System can not be configured with Global Configurator.

8. **Can each room be given a unique name in the IP HelpDesk software instead of using an IP address?**
   Yes. Within the HelpDesk software, each room can be given a unique name.

9. **Can a Global Configurator 2.x project file be used during manual configuration of the IP Intercom System?**
   Yes. Importing the Global Configurator 2.x project file will populate the IP Intercom HelpDesk software listing of MLC 226 IP MediaLink Controllers with connected IP Intercom Modules.